

IVCHENKO, S., kand. sel'skokhozyaystvennykh nauk

Ukrainian eucalypti: Znan. ta pratsia no.3:21-22 Mr '59.

(MIRA 12:10)

(Eucalyptus)(Ukraine--Poplar)

IVCHENKO, Sergey Ivanovich, kand.sel'skokhoz.nauk; KHINTSKARIYA, Ye.N.,
red.; SMIRNOVA, M.I., tekhn.red.

[The school arboretum] Shkol'nyi dendrarii. Moskva, Gos.uchebno-
pedagog.izd-vo M-va prosv.RSFSR, 1960. 235 p.

(MIRA 13:12)

(School gardens)

IVCHENKO, S., starshiy nauchnyy sotrudnik, kand.sek'skokhoz.nauk

Green protection. Znan. ta pratsia no. 4:8 Ap '61, (MIRA 14:5)

1. TSentral'nyy respublikanskiy botanicheskiy sad AN USSR.
(Afforestation)

IVCHENKO, S., starshiy nauchnyy sotrudnik

Garden on the Dnieper River. Znan. ta pratsia no.7:16-17 J1 '62.

(MIRA 15:7)

1. Tsentral'nyy respublikanskiy botenicheskiy sad AN UkrSSR.
(Kiev—Botanical gardens)

SRBLOMOV, I.K.; SOROKOVA, Ye.V.; LYCHENKO, E.I.

Flow of biogenic elements in the Don River. Trudy AzNIIRKH
no.6:7-16 '63. (MIRA 17:8)

IVCHENKO, Sergey Ivanovich; ANTONYUK, L., red.

[Riddles of cinchona; stories about trees] Zagadki
tsinkhory; rasskazy o derev'iaxh. Moskva, Molodaia gvardia,
1965. 206 p. (MIRA 18:5)

IVCHENKO, T.P.

Increasing the package size on carding machines. Teket. prom.
19 no.6:68-69 Je '59. (MIRA 12:9)

1. Master Poltavsky khlopkopryadil'noy fabriki.
(Carding machines)

IVCHENKO, V.M., inzh.

Diagrams for calculating the coefficients of interaction in
the hull-propeller-rudder complex. Sudostroenie 25 no.5:12-14
My. "59. (MIRA 12:8)

(Ship propulsion)

IVCHENKO, V.M., inzh.; PERVOV, V.A., inzh.

Bulb-shaped stern lines on single screw cargo vessels.
Sudostroenie 26 no.6:11-12 Je '60. (MIRA 13:7)
(Hulls(Naval architecture))

SLESAREV, A.; IVCHENKO, V. *M*,

Organization of integrated departments for ship repairs
between voyages. Mor. flot 22 no.9:36-37 S '62. (MIRA 15:12)

1. Glavnyy inzh. sudoremontnogo zavod "Pregel'" (for
Slesarev).

(Ships—Maintenance and repair)

IVCHENKO, V.M., kand. tekhn. nauk

Propeller arrangement. Sudostroenie 28 no.1:13-14 Ja '62.
(MIRA 16:7)

(Propellers)

IVCHENKO, V.M., kand.tekhn.nauk

Propulsion bulb efficiency. Sudostroenie 29 no.11:7-8 N '63.
(MIRA 16:12)

IVCHENKO, V.M. (Leningrad)

"Boundary value problems of the ship motor"

report presented at the 2nd All-Union Congress on Theoretical
and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

RECEIVED MAY 11 1964

broader of propellers in transport vessels. Submarine no. 7:8-10
(MIRA 18:8)

L 13371-66 (N) BWT(m)/ETC(F)/EFF(n)-2/EMQ(m)/SWP(b) LJP(s)
 ACC NR: AP6002342 SOURCE CODE: UR/0198/85/001/012/0107/0112

AUTHOR: Ivchenko, V. M. (Kiev)

ORG: Institute of Hydromechanics, AN UkrSSR (Institut gidromekhaniki, AN UkrSSR)

TITLE: Blade theory in regimes of supercavitations

SOURCE: Prikladnaya mekhanika, v. 1, no. 12, 1965, 107-112

TOPIC TAGS: cavitation, hydrodynamics, propeller blade, incompressible flow, acceleration potential, integral equation

ABSTRACT: On the basis of Prandtl's acceleration potential, a boundary value problem is formulated for design and check analysis of marine engines operating in sub- and supercavitation regimes. The droplet-liquid flow is assumed to be ideal and incompressible, and the blades are assumed thin, such that a linear theory will be applicable. The unsteady hydrodynamic equations are combined with the impenetrability condition for the blades to yield

$$W_n = \frac{\partial f_i}{\partial t} + V_s \frac{\partial f_i}{\partial s} + W_m = \left(\frac{\partial}{\partial t} + V_s \frac{\partial}{\partial s} \right) f_i + W_m = \left(\frac{\partial}{\partial t} + V_s \frac{\partial}{\partial s} \right) \left(e J_a \pm \frac{c}{2} \Delta J_i \right) + V_s \Delta \alpha_s$$

$$W_m = \vec{n}; W_s = V_s \Delta \alpha_s(t, r, s, n)$$

where the equation for the blade surface is given by $F_i = n, -f_i(t, r, s) = 0$.

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ACC NR: AP6002342

For the noncavitating case, two problems are studied: determine the blade geometry for a given pressure distribution, or, determine the hydrodynamic characteristics for a given blade geometry. The first analysis leads to the integral equation

$$-qV^2 \frac{\partial^2 f}{\partial s^2} = \frac{1}{4\pi} \sum_{k=0}^{z-1} \left\{ v.p. \iint_{S_k} |\rho| \frac{\partial^2 L}{\partial n' \partial n} dS_k - \iint_{S_k} \left[\frac{\partial p}{\partial n'} \right] \frac{\partial L}{\partial n} dS_k \right\}.$$

The corresponding expression for the supercavitating flow is given by

$$\frac{1}{4\pi} \sum_{k=0}^{z-1} \iint_{S_k} \left[\frac{\partial p}{\partial n'} \right] L dS_k = (p_s - p_o) - \frac{|\rho|_1}{2} + \frac{1}{4\pi} \sum_{k=0}^{z-1} \iint_{S_k} |\rho| \frac{\partial L}{\partial n} dS_k$$

/, $k = 0, 1, 2 \dots z-1$.

Similar expressions are obtained for describing the hydrodynamic characteristics of the blade flow. Orig. art. has: 15 equations and 1 figure.

SUB CODE: 21, 13 SUBM DATE: 11Jan65/ ORIG REF: 006/ OTH REF: 003

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L 36468-66 EWP(m)/EWT(1) WW/GB

ACC NR: AT6016717 (N) SOURCE CODE: UR/0000/65/000/000/0041/0044

AUTHOR: Ivchenko, V. M. 50

ORG: Institute of Hydromechanics AN UkrSSR (Institut gidromekhaniki AN UkrSSR) B+1

TITLE: The Zhukovskiy and Lagally formulas

SOURCE: AN UkrSSR. Gidrodinamika bol'shikh skorostey (High speed hydrodynamics), no. 1. Kiev, Izd-vo Naukova dumka, 1965, 41-44

TOPIC TAGS: fluid flow, Euler equation, hydrodynamic theory

ABSTRACT: The article demonstrates that the Zhukovskiy and Lagally theorems for the arbitrary motion of a fluid can be obtained from the momentum equation for a continuous medium. It is assumed that the fluid contains features of the first and second types (sources and eddies). Then, with the Euler approach to the description of the field of a continuous medium, application of the momentum law to an elementary particle of the fluid gives

$$\frac{D_s(\rho \vec{v})}{dt} = (\text{Div } \vec{T} + \vec{F} - \vec{q}) \delta \tau, \quad (1)$$

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ACC NR: AT6016717

where ρ is the mass density of the fluid; \vec{w} is the absolute velocity of the motion of the fluid; $\delta\tau$ is the elementary volume of a particle of the fluid; T is the stress tensor; \vec{F} is the mass force; \vec{q} is the reactions of the fluid, immovable in an absolute system of coordinates; D/dt is the derivative with respect to time. On the above premises, the author proceeds to a derivation of the Zhukovskiy and Lagally formulas. Orig. art. has: 16 formulas.

SUB CODE: 20, 12/ SUBM DATE: 30Sep65/ ORIG REF: 002/ OTH REF: 001

Card 2/2 *JS*

IVCHENKO, V.V.; SLESAREV, A.P.; MITINA, I.I., red.

[Work organization in enterprises for ship maintenance
between voyages] Organizatsiia raboty predpriatii mezh-
reisovogo remonta flota. Moskva, Rybnoe khozizistvo,
1963. 53 p. (MIRA 17:6)

IVCHENKO, Vladislav Vasil'yevich; STUDENETSKIY, S.A., glav.
red.; VLASENKO, V.G., red.

[Mathematical optimization principles in planning in the
fishing industry] Matematicheskie osnovy optimizatsii pla-
nirovaniia v rybnoi promyshlennosti. Kaliningrad, Izd-vo
gazety "Kaliningradskaia pravda" 1964. 57 p.
(MIRA 18:6)

L 2552-66 EWT(d)/EED-2/EWP(1) IJP(c) BB/GG

ACCESSION NR: AF5021338

58
56 UR/0120/65/000/004/0094/0100
539.1.075

AUTHORS: Yekator, A. B.⁴⁴; Ivchenko, V. Ye.⁴⁴; Katalin, L. A.⁴⁴; Meshkov, N. V.⁴⁴
Smirnov, V. I.; Chernukhin, V. L.⁴⁴

TITLE: Multidimensional analyzer with preliminary data processing and combined memory

SOURCE: Priory i tekhnika eksperimenta, no. 4, 1965, 94-100

TOPIC TAGS: computer, computer control, computer input device, computer memory, computer storage device, memory core, reactor, nuclear energy, neutron radiation, radiation measurement

ABSTRACT: The functional characteristics of a multidimensional analyzer are described. The analyzer was created for studying energy and angular distribution of slow neutrons; however, it may also be used for other multidimensional measurements with corresponding input devices. The storage unit of the device consists of a memory having ferrite cores and a magnetic tape 6.25 mm wide with four recording channels. The combination of integral and nonintegral memory units allows a flexible memory system both in terms of size and in terms of on-line control during

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ACCESSION NR: AP5021338

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the conduct of an experiment. Preliminary automatic data processing includes the functions of collection, sorting, certain calculations, and translation for computer input or from printer and oscillograph output. Basic units of the hardware are: a) the input unit, b) core memory, c) magnetic tape memory, and d) the output and data processing unit. All units are built from semiconductor and magnetic elements. The basic core memory has a capacity of 2048 16-bit words and is provided with a speed monitor feature to give a slower recording rate at input loading. Block diagrams are included, showing the flow of information through the composite system during data collection, sorting, transformation, and continuous process control. Particular information on cycle times and recording speeds is given. For neutron tracking experiments, data pass through detection, signal amplification, phasing, and time conversion into machine code. The passage of information from each detector is parallel and independent. Specific information on measurement time interval limitations is given. Functional block diagrams of the input unit, high speed intermediate memory, and magnetic tape recording unit are shown and discussed. Data may be processed prior to output for obtaining the double differential section of neutrons. The formulae used in the calculations are given. The authors thank A. V. Andriashin, B. Ya.

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ACCESSION NR: AP5021338

⁴⁴Gerasimov, and ⁴⁴N. Ye. Detinenko for assisting in the planning and design of the analyzer, and S. I. Chubarov for his interest and assistance. Orig. art. has: 3 figures and 2 formulas. [04]

ASSOCIATION: Fiziko-energeticheskii institut GKAE, Obninsk (Physics and Power Engineering Institute, GKAE) ⁴⁴

SUBMITTED: 11Jan65

ENCL: 00

SUB CODE: DP, NP

NO REF SOV: 005

OTHER: 000

ATD PRESS: 4109

Card

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3/3

IVCHENKO, Ya.G.; KANTOR, I.I.; KOSAREVA, L.A.; SEVAST'YANOVA, G.V.;
EYGENSON, A.S.

Grading crude oils of Bashkiria and Tataria. Trudy BashNII
NP no.1:5-19 '59. (MIRA 12:6)
(Petroleum--Analysis)

SOV/65-59-4-2/14

AUTHORS: Eygenson, A.S., Ivchenko, Ye.G. and Kantor, I.I.

TITLE: Selection of Processing Methods of High Sulphur-Content
Petroleums from the Bashkirskaya ASSR (K vyboru skhem
pererabotki vysokosernistyykh neftey Bashkirskoy ASSR)

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1959, Nr 4,
pp 7-12 (USSR)

ABSTRACT: The extraction of petroleums with a high sulphur content
is to be increased during 1959 to 1965 and will, in 1965,
be 6 to 7 times greater than in 1958. It is foreseen
that the content of diesel fuels in the petroleum
(containing up to 1% sulphur) will fall from 19% in
1958 to 8% in 1965. The sulphur content of the fractions
boiling at different temperatures, and of goudron, is
given and also listed in Table 1. Thus, the sulphur
content in gasoline and kerosene-gas-oil fractions
exceeds the permissible limits as specified by GOST.
The vacuum gas-oil can either be subjected to cracking
and subsequent hydro-desulphurisation of the gasoline and
light gas-oil, or preliminary hydro-desulphurisation of
the crude can be carried out which makes it possible to

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SOV/65-59-4-2/14

Selection of Processing Methods of High Sulphur-Content Petroleums
from the Bashkirsk

obtain low sulphur-content products. Relevant experiments were carried out by VNII NP and results published by A.V.Agafonov et al in the article "Catalytic Cracking of Crudes and Hydro-Purified Vacuum Gas-Oil obtained from Arlansk Petroleum" (pp 25-31 of this same issue). Hydro-purification reduced considerably the sulphur- and nitrogen-content as well as the viscosity and specific weight of the gas-oil. Results obtained during catalytic cracking processes indicate that the yield of light fractions during the processing of the hydro-purified crudes increases by 7 to 8%; the amount of coke formation decreases to a considerable extent. The quality of the desulphurised crudes is considerably improved. The heavy gas-oil contains about 0.4% sulphur and can be used as a component for low sulphur content fuels. Very satisfactory results were obtained during the coking of high sulphur-content goudron; these experiments were carried out by A.F.Krasyukov and make it possible to

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Selection of Processing Methods of High Sulphur-Content Petroleums
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obtain high yields of light fractions. The gasoline and gas-oil distillates contain 1.13% and 2.7% sulphur respectively. The hydro-desulphurised gasoline contains up to 0.015% sulphur, has an octane number of 44 and an iodine number of less than 1; it can be used alone or in mixtures with fractions obtained during direct distillation as raw materials for catalytic reforming processes. The hydro-purified light gas-oil fraction (between 200 and 350°C) contains up to 0.2% sulphur, has an iodine number of 4 to 6 and its cetane number is 42 to 44. The heavy gas-oil can be used as solvent for goudron and as a fuel component. Comparative costs of gasolines obtained by these processes and by fractional distillation are given in Table 2. High-quality petroleum products can be obtained by processing petroleums with a high content of sulphur and tars. Three different methods of processing high sulphur-content petroleums were investigated: 1) low degree of conversion (35% yield of light fractions); 2) medium degree of

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Selection of Processing Methods of High Sulphur-Content Petroleums
from the Bashkirsk

conversion (57% yield of light fractions) and
3) high degree of conversion (66% of light fractions).
By using the last method fractions boiling at 85,
85 to 120, 120 to 180, 180 to 240, 240 to 350 and
350 to 450°C have been obtained. The gasoline fractions
boiling at 85 to 120°C and 120 to 180°C are catalytically
reformed. The 180 to 240°C fraction is subjected to hydro-
purification, and the purified component of kerosine
mixed with the unpurified 120 to 180°C fraction, for
obtaining industrial kerosine. Comparative data of these
three basic methods are given in Table 3. In each case
the octane number of the gasoline was >72 and the sulphur
content of the diesel fuel 1%. The most satisfactory
results for high quality motor fuels and raw materials
for the petrochemical industry are obtained when using
method Nr 3. There are 2 figures and 3 tables.

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AUTHORS: Amfurov, A.Y., Aheyeva, B.T., Andreyeva, A.S.,
Eysenson, A.S., Kantor, I.I. and Ivchanko, Ye.G.

TITLE: Catalytic Cracking of Crude and Hydro-Purified Vacuum Gas-Oil from Arlan Petroleum (Kataliticheskiy breking izhodnogo i gidroochishchennogo vakuumnogo gasoilya arlanskoy nefti)

SOV/65-59-4-4/14

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1959, Nr 4, pp 16-24 (USSR)

ABSTRACT: Vacuum gas-oil from Arlan petroleum contains 5.2% sulphur compounds. Oil's nitrogen compounds and 24% tarry substances; these quantities are larger than the corresponding quantities in heavy gas-oil from Tatarstan and Bashkirsk petroleum. These components block the active surface of the catalyst during cracking, prevent the access of hydrocarbons molecules and therefore decrease the degree of conversion of the crude material. Considerable amounts of coke are deposited on the catalyst which inhibits secondary reactions and leads to decreased yields and inferior quality end-products. Hydro-purification was carried out on a continuous apparatus in the VIII BP by

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R.A. Chepurov and R.M. Yudinson). A stationary aluminium-cobalt-molybdenum catalyst was used at 350°C, a pressure of 50 atm and space velocity of the supplied crude material of 0.7 hour⁻¹. The properties of the starting material and of the hydro-purified vacuum gas-oil are tabulated (table 1). The octane number of the end product was appreciably higher than when using fractional distillation (58.5 as compared to 41.0) and contained considerably less sulphur (0.013 as against 0.17%). The properties of the gas-oil fractions are listed in table 2. Cracking experiments of both the crude and hydro-purified vacuum gas-oil were carried out on a pilot plant with a 100 g catalyst at temperatures within the limits of 430-520°C, atmospheric pressure and a space velocity of 0.65 to 1.5, calculated on the volume of the catalyst per hour. The ratio of the catalyst to the crude material was constant in all experiments and equalled 5:1 (table 3). Optimum

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yields of petrol were obtained at temperatures between 450 and 475°C when the optimum space velocity of the supplied raw material was within the limits of 1.0 to 0.45 hour⁻¹. The hydro-purified vacuum gas-oil could more easily be processed; an optimum yield of solid components at the same space velocities was achieved at 30°C. The authors conclude that the presence of a considerable quantity of light fractions boiling up to 350°C (37.6 as against 19.4%) influence the yield of the light components. The optimum yield at this temperature was 66 to 67% by weight as against 58 to 59% for the crude material. The results of the cracking experiments indicate that the hydro-purification of the crude oil appreciably improves the cracking conditions and also the yield of petrol. The process conditions and also the yields and properties of the cracking products (compare table 4). The gasoline obtained by this process is less unsaturated, contains more aromatic compounds and has higher octane numbers (80 to 81.5 as compared to

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SOV/65-59-A-4/14
Catalytic Cracking of Crude and Hydro-Purified Vacuum Gas-Oil from
Asian Petroleum

77.7 to 80.7) (Fig 2). A lower content of unsaturated compounds renders the gasoline more stable. Its induction period exceeds 600 minutes. The light catalytic gas-oils, obtained during the cracking of hydro-purified crudes, show improved properties. Their cetane number is 34 to 36 (as against 30 to 33) and they contain 0.21 to 0.36% sulphur (as against 2.6 to 3.2%) (Fig 3). These light gas-oils can be used directly as components of diesel fuels. The heavy catalytic gas-oils (fractions boiling above 350°C) can be used for the production of lubricating oils or re-used as recycles. In both cases 2 to 3% of the tarry (tail) fractions have to be separated. The gaseous hydrocarbons produced by this process are of interest as starting materials for petrochemical synthesis. The cracking of the tail fractions yields a rich of unsaturated and saturated hydrocarbons in gaseous reaction products, and on the

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content of unsaturated hydrocarbons in the gas, is shown in a graph (Fig 4). There are 4 figures, 4 tables and 3 English references.

Card 5/5

EYGENSON, A.S.; IVCHENKO, Ye.G.; KANTOR, I.L.; KOSAREVA, L.A.; SEYAST'YANCOVA, G.V.

New refining methods for high sulfur-bearing crudes of Bashkiria.

Trudy Bash NII NP no.3:3-18 '60. (MIRA 14:4)

(Bashkiria--Petroleum--Refining)

31886

S/081/62/000/303/064/050
B149/B101

. 11.0100 (5419, 3019)

AUTHORS: Eygeson, A. S., Ivchenko, Ye. G., Kontor, I. L., Sevast'yanova, G. V.

TITLE: Petroleum of new deposits in the Bashkirskaya ASSR

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1962, 452, abstract 3M131 (Sb. "Khimiya svergaorgan. soyedineniy, soedyneniya i v neftyakh i nefteproduktakh. v. 4" M., Gostoptekhizdat, 1961, 100-102)

TEXT: The result of analyses of petroleum of high sulfur content from different deposits of the Bashkirskaya ASSR shows that this petroleum can be divided into three groups according to the distribution of S among the fractions: (a) Petroleum with a small content of S in the gasoline fractions ($\leq 1\%$) and a gradually and uniformly increasing content in the kerosene fractions and in the diesel fuel oils. (b) Petroleum with low content of S in the gasoline fractions and with an infrequent increase of its content in the kerosene and diesel oil fractions. (c) Petroleum with considerable S content in the gasoline fractions ($\geq 0.5\%$) and with corresponding

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IVCHENKO, Yevgeniy Gordeyevna; SEVAST'YANOVA, Galina Vasil'yevna;
TITSKAYA, B.F., ved. red.; TROFIMOV, A.V., tekhn. red.

[Types of sour petroleums in Bashkiria] Sernistye i vyso-
kosernistye nefi Bashkirskoi ASSR; spravochnaia kniga.
Moskva, Gostoptekhizdat, 1963. 232 p. (MIRA 16:4)
(Bashkiria--Petroleum--Analysis)

IVCHENKO, Ye.G.; SEVAST'YANOVA, G.V.; GARIPOVA, L.Z.

Oil of the Yusupovo field. Trudy BashNII NP no.6:63-67 '63.
(MIRA 17:5)

SHVETSIYANOVA, G.V.; IVCHENKO, Ye.S.

Investigating a kerosene-gas oil fraction from Arian crude.
Trudy BashNEI NI' no.6:66-75 '63.

Thermal stability of sulfur-bearing crude from Bashkiria.
Ibid.:75-79 (MCPA 17:5)

ACCESSION NR: AT4040447

8/2933/64/006/000/0005/0008

AUTHOR: Ivchenko, Ye. G.; Sevast'yanova, G. V.

TITLE: Petroleum from new fields in Bashkiria

SOURCE: AN SSSR. Bashkirskiy filial. Khimiya soraorganicheskikh soedineniy, soderzhashchikhsya v neft'yakh i nefteproduktakh, v. 6, 1964, 5-8:

TOPIC TAGS: petroleum, petroleum composition, petroleum physical property, Soviet petroleum, Bashkir petroleum

ABSTRACT: The authors report the results of analyses of petroleum from four new sites in the Bashkir ASSR, carried out in 1960. They found that Saitovskoye petroleum contains 2.73% S, 16.9% tarry silica gels and 7.5% asphaltenes. The density is 0.885 and the viscosity is 23.0 centistokes (at 20C). The light fractions up to 200 and 300C account for 21 and 37.3%, respectively. Nurskoye petroleum contains 3.94% S, 60% tars and 3% paraffins. The density is 0.923 and the viscosity is 145.3 centistokes. The yield of the 200 and 300C fractions is 12.8 and 24%, respectively. Stakhanovskoye petroleum contains 2.45% S, 60% tars and 3.3%

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IVCHENKO, Ye.G.; SEVAST'YANOVA, G.V.; GARIPOVA, L.Z.; KUZILOVA, E.T.

Oil of the Sergeyevka field. Trudy BashNII NP no.7:4-9 '64.
(MIRA 17:9)

ACCESSION NR: AT4043271

S/2744/64/000/007/0009/0014

AUTHOR: Sevast'yanova, G. V., Ivchenko, Ye. G.

TITLE: Aromatic hydrocarbons in Arlan petroleum fractions obtained at 180-200 and 200-300C

SOURCE: Ufa. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti. Trudy*, no. 7, 1964. Sernisty*ye nefi i produkty* ikh pererabotki (Sour crude oil and products of refining), 9-14

TOPIC TAGS: hydrocarbon, aromatic hydrocarbon, Arlan petroleum, alkylbenzene, tetra-substituted alkylbenzene, trisubstituted alkylbenzene, sulfur, absorption spectrum, aluminum oxide, chromatography, gas-liquid chromatography, petroleum refining

ABSTRACT: Arlan petroleum fractions obtained at 180-200 and 200-300C were investigated by gas-liquid chromatography. Tabulated data show that, in the 180-200C aromatic fraction, there was a considerable amount of tetrasubstituted alkylbenzene and a smaller amount of trisubstituted alkylbenzene. After removing the sulfur compounds from the 200-300C fraction, the product (accounting for 80.69% of the aromatic fraction) had the following characteristics: density 0.8904, refractive index 1.5082, molecular weight 193, sulfur content 0.02%. This fraction was then subjected to chromatography over aluminum oxide

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ACCESSION NR: AT4043271

and the mono and bicyclic aromatic hydrocarbons were separated. The monocyclid hydrocarbons were chromatographed again to yield narrow fractions based on the refractive index, and these narrow fractions were subjected to vacuum fractionation to obtain still narrower fractions. Finally, the structural composition of five-degree fractions was determined by absorption spectra over an ultraviolet light range of 230-290 mμ. Spectral analysis of the narrow fractions obtained from a fraction with a refractive index n_D^{20} of 1.51-1.52 showed that 1, 3-, 1, 3, 5- and tetraalkyl-benzones also predominate in these fractions. The narrow five-degree fractions obtained from fractions with n_D^{20} - 1.50-1.51 and n_D^{20} = 1.51-1.52 had a very similar structural composition. Depending on the boiling temperature and molecular weight, the hydrocarbon fractions forming each structural group differ in chain length, degree of branching or ring formation of substituents. Orig. art. has: 3 figures and 4 tables.

ASSOCIATION: Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti, Ufa (Bashkir Scientific Research Institute for Petroleum Refining)

SUBMITTED: 00

ENCL: 00

SUB CODE: OC, FP

NO REF BOV: 003

OTHER: 002

Cord 2/2

SEVAST'YANOVA, G.V.; IVCHENKO, Ye.G.

Aromatic hydrocarbons in fractions ranging from 180-200°C and
200-300°C of Arlan oil. Trudy BashNII NP no.789-14 '64.
(MIRA 1719)

ACCESSION NR: AT4043272

S/2744/64/000/007/0015/0019

AUTHOR: Ivchenko, Ye. G., Eygenson, A. B., Sevast'yanova, G. V., Garipova, L. Z.

TITLE: Quality of commercial Romashkin petroleum

SOURCE: Ufa. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefli. Trudy*, no. 7, 1964. Sernisty*ye nefli i produkty* ikh pererabotki (Sour crude oil and products of refining), 15-19

TOPIC TAGS: petroleum, Romashkin petroleum, sulfur content, octane rating, petroleum residue, petroleum refining

ABSTRACT: It was found experimentally that the sulfur content of Romashkin petroleum had increased from 1.6% (in 1956) to 1.8-2.0% (1962) due to a change in the proportion of crude oils from different sites within the Romashkin area. Since an increase in sulfur content markedly affects the quality of petroleum products, the 1962 petroleum sample was further investigated for sulfur content in the various fractions. Results are tabulated and the distribution of sulfur in narrow fractions is plotted against temperature (see the

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ACCESSION NR: AT4043272

Enclosure). The total content of fractions obtained at 200 and 300C remained almost unchanged, as did the octane characteristics of the benzene distillates obtained from the 1962 sample. Fractions above 270C had a higher sulfur content than in 1956. The sulfur content of the benzene fractions was low, while that of the distillates of diesel fuel and residues was increased. An increase in the sulfur content of commercial petroleum by 0.26% causes the yield of white products to decrease by 1.5%. Investigation of the sulfur content in the petroleum residues showed that fractions taken below 350C had a lower sulfur content than specified by the standards, but higher by 0.5% than in the analogous residue from a 1956 sample. When processed in a cracking plant, this residue gave a low-standard fuel. The sorting of petroleum according to the sulfur content is absolutely essential for planning the adequate technological conditions to obtain high-grade products. Orig. art. has: 1 figure and 4 tables.

ASSOCIATION: Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefli, Ufa
(Bashkir Scientific Research Institute for Petroleum Refining)

Card 2/4

ACCESSION NR: A14043272

SUBMITTED: 00

ENCL: 01

SUB CODE: FP

NO REF SOV: 003

OTHER: 000

Card 3/4

ACCESSION NR: AI40432745

ENCLOSURE

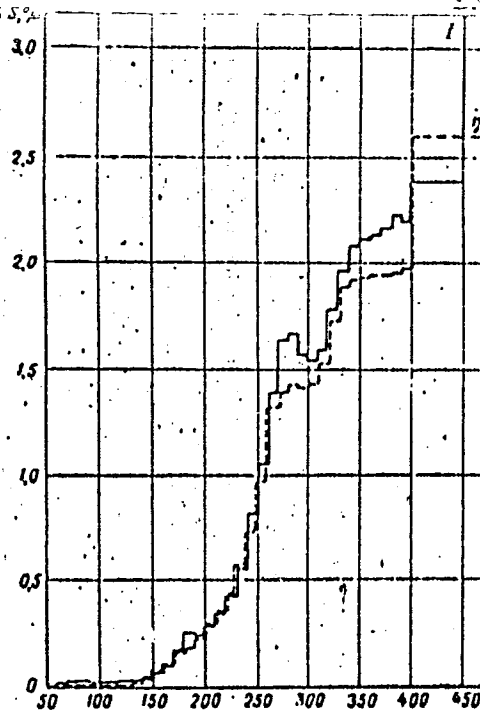


Fig. 1. Distribution of sulfur in 10-degree fractions of Romashkin petroleum: I - 1962; II = 1956. Abscissa = temperature in °C.

Card 4/4

IVCHENKO, Ye.G.; EYGENSON, A.S.; SEVAST'YANOVA, G.V.; GARIPOVA, L.Z.

Quality of commercial Romashkino oil. Trudy BashNII NP
no.7:15-19 '64. (MIRA 17:9)

IVCHENKO, Ye.G.; SEVAST'YANOVA, G.V.; GARIPOVA, L.Z.

Petroleum from the Karacha-Yelga oil field. Khim. i tekhn. topl.
i masel 10 no.10:16-18 O '65. (MIRA 18:10)

1. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke
nefti.

IVCHENKO, Ye.G.; SEVAST'YANOVA, G.V.; GARIPOVA, L.Z.

Oils of the Novokhazino, Znamenka, and other fields of Bashkiria.

Trudy Bash NIINP no.5:230-238 '62.

(MIRA 17:10)

04112-00

001100

ACC NR: AR6017200

SOURCE CODE: UR/0058/65/000/012/A033/A033

AUTHOR: Andriashin, A. V.; Gerasimov, B. Ya.; Yekator, A. B.; Ivchenko, V. Ye.; 43
Meshkov, N. V.; Smirnov, V. I.; Chernukhin, V. L. 42

TITLE: Multidimensional analyzer with preliminary processing of the information and with combined-type memory

SOURCE: Ref. zh. Fizika, Abs. 12A317

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelektron. T. 2. M., Atomizdat, 1965, 147-159

TOPIC TAGS: multichannel analyzer, slow neutron, neutron spectrum, angular distribution, ferrite core memory, magnetic recording tape, computer component, *NEUTRON ENERGY DISTRIBUTION*

ABSTRACT: The authors describe a multidimensional analyzer, intended for the investigation of energy and angular distributions of slow neutrons. The recording unit of the analyzer consists of a ferrite-core memory and a magnetic-tape of 6.25 mm width with four-track recording. The combination of integrating and non-integrating memory devices makes it possible to construct a flexible memory system having large capacity as well as permitting the exercise of control over the course of the experiment, preliminary adjustments, preliminary processing of information, etc. The analyzer consists of the following fundamental units, constructed entirely of semiconductor and magnetic elements: a) input unit; b) ferrite-core memory; c) magnetic-tape memory; d) equalizing unit (intermediate ferrite memory); e) unit for insertion and processing

Card 1/2

3417-CC

ACC NR: AR6017200

of data. Depending on the chosen operating conditions, the functional connection between the blocks is changed by means of switches. The analyzer is constructed in the form of four individual racks with individual power supplies and control panels. L. S.
[Translation of abstract]

SUB CODE: 20, 09

Card 2/2 ✓

PUSTOVALOV, L.V., otv. red.; AL'TGAUZEN, M.N., doktor geol.-min. nauk, red.; VLAS' K.A., red.[deceased]; DOIGOFOLOV, N.N., red.; IVENSEN, Yu.P., doktor geol.-min.nauk, red.; POZHARITSKIY, K.L., doktor geol.-min. nauk, red.; SERDYUCHENKO, D.P., doktor geol.-min. nauk, red.; KRASNOVA, N.E., red.

[Metals in sedimentary formations; heavy nonferrous, minor and rare metals] Metally v osadochnykh tolshchakh; tiazhelye tsvetnye metally malye i redkie metally. Moskva, Nauka, 1965. 389 p. (MIRA 19:1)

1. Moscow. Laboratoriya osadochnykh poleznykh iskopayemykh.

SOMINSKIY, Vladimir Samoylovich, dotsent, kand.tekhn.nauk; GUREVICH, Semen Borisovich, inzh.; KOGAN, Bronislava L'vovna, dotsent, kand.ekon.nauk; UCHASTKINA, Zoya Vasil'yevna, dotsent, kand.tekhn.nauk. Prinimal uchastiye: IVCHER, M.I., starshiy pre-podavatel'. PEDORENKO, N.P., prof., doktor ekon.nauk, retsenzent; SARMAJSKAYA, G.I., red.isd-va; BRAZHISHKO, L.V., tekhn.red.; PROKOP'YEVA, L.N., tekhn.red.

[Production organization and planning at pulp and paper mills]
Organizatsiia i planirovanie proizvodstva na tsellulozno-
bumazhnykh predpriiatiakh. Moskva, Goslesbunizdat, 1958.
257 p. (MIRA 12:6)
(Woodpulp industry) (Paper industry)

IVCHER, M.I.; IOFFE, O.G.

Calculation of the costs of steam and electric power. Bum.prom.

33 no.11:26 N '58.

(MIRA 13:8)

(Paper industry)

(Steam engineering--Costs)

(Power engineering--Costs)

IVCHER, M.I., kand.ekonom.nauk

Calculating the production costs of paper and cardboard by
the surface area. Bum.prom. 38 no.9:27-28 S '63. (MIRA 16:11)

IVCHER, Mark Isaakovich, kand. ekon. nauk; SINITSYN, M.P., red.

[Problems of calculating and analyzing the costs of woodpulp-
paper production] Voprosy kal'kulirovaniia i analiza sebe-
stromosti tseliulozno-bumazhnoi produktsii. Moskva, Lennaia
promyshl., 1965. 110 p. (MIRA 18:3)

WICHNER, M.I.

Analysis of the utilization of industrial equipment in the woodpulp and paper industry. Study I/TI/88P no. 15:29-35 '65.

Calculating the losses caused by the manufacture of products of low quality and their analysis. Ibid.:11-60

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PAMFILOV, A.V.; LOPUSHANSKAYA, A.I.; IVCHER, T.S.

Irreversible polarographic waves of cadmium and lead hexaphosphates. Ukr.khim.zhur. 27 no.5:598-603 '61. (MIRA 14:9)

1. Chernovitskiy gosudarstvennyy universitet.
(Lead phosphate) (Cadmium phosphate)
(Polarography)

ZIL'BERMAN, Ye.N.; IVCHER, T.S.; MEYMAN, S.B.; KULIKOVA, A.Ye.;
PEREPLETCHIKOVA, Ye.M.; TEPLYAKOV, N.M.

Formation of 2-cyclohexen-1-one in the dehydrogenation of
cyclohexanol. Neftekhimia 2 no.1:110-114, Ja-F '62. (MIRA 15:5)
(Cyclohexenone) (Cyclohexanol)

IVCHER, T.S.; PEREPLETCHIKOVA, Ye.M.; ZIL'BERMAN, Ye.N.

Polarographic determination of 2-cyclohexen-1-one in cyclohexanone
and cyclohexanol. Zhur.anal.khim. 17 no.8:1005-1008 N '62.
(MIRA 15:10)

(Cyclohexenone)

(Cyclohexanone)

(Cyclohexanol)

IVCHER, T.S.; PEREPLETCHIKOVA, Ye.M.; ZIL'BERMAN, Ye.N.

Polarographic study of some impurities in cyclohexanone. Zhur.-
prikl.khim. 35 no.3:634-637 Mr '62. (MIRA 15:4)
(Cyclohexanone) (Polarography)

GANINA, V.I.; IVCHER, T.S.; POMERANTSEVA, E.G.; PEREPLETCHIKOVA, Ye.M.;
ZIL'BERMAN, Ye.N.

Polarographic and spectrophotometric determination of α , β
-unsaturated ketones in cyclohexanone. Zav. lab. 30
no.5:541-542 '64. (MIRA 17:5)

IVCHER, T.S.; ZIL'BERMAN, Ye.N.; PERPLETCHIKOVA, Ye.M.

Kinetic recombination currents in the polarographic reduction of 2-cyclohexen-
l-ones. Zhur. fiz. khim. 39 no.3:749-751 Mr '65. (MIRA 18:7)

ATONOV, A.; DURPATOV, N.

"All-Union Agricultural Exhibition in Moscow." (To Be Contd.). P. 34,
(KOOOPERATIVNO ZEMEDELIE, Vol. 9, No. 10, 1954, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4
No. 5, May 1955, Uncl.

IVONET, A.; DUMBATOV, N.

"At the All-Union Agricultural Exhibition in Moscow." p. 34,
(KOOPERATIVNO ZEMEDELIE, Vol. 10, No. 1, Jan 1955, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4,
No. 5, May 1955, Uncl.

IVCHEV, K.

Konishev, P. Results at the agricultural scientific research institutes during 1955. p. 8.

KOOPERATIVNO ZEMEDELIE, Sofiya, Vol. 11, no. 4, Apr. 1956.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6 June 1956, Uncl.

PAIAKOV, Iv.; ZHELIAZKOVA-PANAIOTOVA, M.; IVCHINOVA, L.

Structural and textural characteristics, and mineral
composition of the chromite ores of Dobromirtsi. Godishnik
biol 56 219-251 '61/'62.

BRESKOVSKA, V.; IVCHINOVA, L.

Wavellite of the Madzharovo complex-ore deposit. Godishnik
biol 56 275-284 '61/'62.

PAIAKOV, Iv.; ZHELIAZKOVA-PANISOVA, M.; IVCHINOVA, L.

Structural and text: 1. peculiarities and mineral composition of chromite ores from the Dobromirtsi deposits. Godishnik biol 56 no.2:219-251 '61-'62 [Publ. '63].

BRESKOVSKA, V.; IVCHINOVA, I.

Wavellite from the Madzharovo complex ore deposits. Godishnik
biol 56 no.2:275-284 '61-'62 [Publ. '63].

IVCSICS, L.

Characterizing the beginning of alluvium movements with invariant quality group in case of bed load. p. 425.

HIDROLOGIAL KOZLONY, HYDROLOGICAL JOURNAL. Budapest, Hungary, Vol. 39, No. 6, Dec. 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 9, No. 2, Feb. 1960
Uncl.

SUBJECTS AND TOPICS																									
SUBJECTS AND TOPICS																									
<p>ca</p> <p>Subterranean waters on the territory of the city of Zagreb (Jugoslavia). II IVERKOVIC, <i>Arhiv hem. i farm. B</i>, 113-7 (117 German) (1929). On the basis of numerous analyses a relationship between the compn. of water and its geographical position is found and a new theory is set up against the assertion of other authors concerning the origin of underground water. JAROSLAV KUCERA</p> <p>14</p>																									
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>FROM: 117.011.01</p> <p>117.011.01</p> <p>117.011.01</p>																									

COMMON ELEMENTS		COMMON VARIABLES	
<p>BC</p> <p>Consistency of chemical composition of Zagreb sub-soil water. H. Truszkowski (Arch. Hemija, 1929, 3, 179-182).—A reply to Jancsek's criticism (of preceding abstract). R. Truszkowski.</p>		<p>A-2</p>	
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>		<p>RESEARCH REPORT</p>	
<p>RESEARCH REPORT</p>		<p>RESEARCH REPORT</p>	

LIST AND 2ND ORDERS																										PROCESSES AND PROPERTIES INDEX																									
<p>Chemical analysis of the sulfurated thermal water of Varaždinske Toplice. Hrvoje Iveković and Ilija Dan- čević. <i>VPS Časopis Voden, PRAVOST</i> Sami. <i>Technika</i> 2, 234-5(1936).—A series of analyses of the thermal waters in Varaždinske Toplice shows that Ca is present in the amt. of 16.40%, Na 9.73%, K 5.18%, Mg 3.50%, Sr, Li, Fe, Mn, Al less than 1% each; carbonate 28.39%, sulfate 18.40%, chloride 10.66%, sulfide, borate, nitrate, silicate, NH₄, phosphate less than 1% each. A comparison with an analysis of 1898 is made. J. G. Tolpin</p>																										<p>12</p>																									
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A volumetric method for rapid determination of iodine in mineral water. H. Iwicki and L. Daněšev. *Archiv. Pharm. 10, 51 (1938).* The sample is treated with HCl and Na_2CO_3 , partly evaporated, filtered, acidified with NaHCO_3 , precipitated with KNO_3 ; the mixt. is made alk. with NaOH , I pptd. and by treating with NaAsO_2 , I is now dissolved as NaI . The soln. is then titrated with a 0.02 N I soln., and the difference between the I contents of this soln. and a blank sample gives the I contents of the water. J. G. Folput

1 (3) Colson

1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX	
<p><i>pn</i></p> <p>Determination of organic matter in water and the value of the analytical results. H. Ivchovic. <i>Plum. Voda, sdraz. Tech.</i> 17, 406-42 (1947); <i>Dep. Sci. Ind. Research, Water Pollution Research, Summary Current Lit.</i> 11, 127. ... Oxidation with $KMnO_4$ is insufficient to det. the org. matter in water as the $KMnO_4$ does not react with all the org. matter. It is also difficult to det. the origin of the org. matter present. Urea is one of the substances which is not broken down by $KMnO_4$. Nitrites cause difficulty in the detn. of the Cl no. by Frohse's method. From the Cl no., the permanganate demand, and the fluorescence in ultraviolet light the nature and amt. of the impurities can be detd. A high Cl no. and permanganate demand and strong fluorescence usually indicate recent pollution. When the Cl no. is higher than the permanganate demand, complex N compds. are present. If the permanganate demand is high, the Cl no. low and the fluorescence strong it points to the presence of vegetable matter or humic acids in a relatively fresh condition.</p> <p>C. L. H</p>		<p>14</p>	
<p>ASR-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			
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1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND POTENTIAL INDEX																			
<p>Consumption of potassium permanganate and chlorine number as methods of determination of organic substances in water. Hrwoje Ivekovic. <i>Arhiv Hem. Tehnol.</i> 12, No. 4-6, 118-24 (in German, 124-3) (1938).--Tabulated exptl. results with 34 aq. solns. of org. substances show that neither KMnO_4 nor NaOCl is able to accomplish complete oxidation. KMnO_4 is more effective except with substances contg. over 15% N with which NaOCl is better. J. G. Tolpin</p>																			
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
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BC

A-

Maitino spring at Ponkovo near Zepce, Bosnia. H. Kovačić, I. Dančević, and M. Herrmann (*Zr.A. Krnjak*, 1939, 14, 21-23).—The H₂O contained Na 0.3072, K 0.0317, Ca 0.3836, Mg 0.4127, Fe 0.0099, NH₃ 0.0003, Cl⁻ 0.2140, SO₄⁼ 0.1979, HCO₃⁻ 0.8427, NO₃⁻ 0.00006, H₂SiO₃ 0.1115, and CO₂ 1.0530 g. per l., in Sept., 1939.

H. T.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

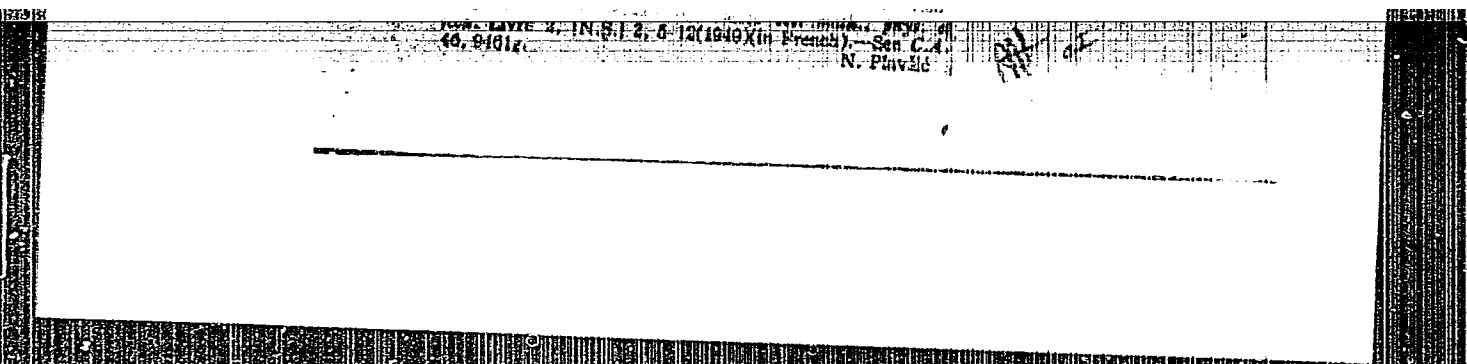
IVERKOVIE, Hrvatska

4660

Application of statistical methods in analytical chemistry

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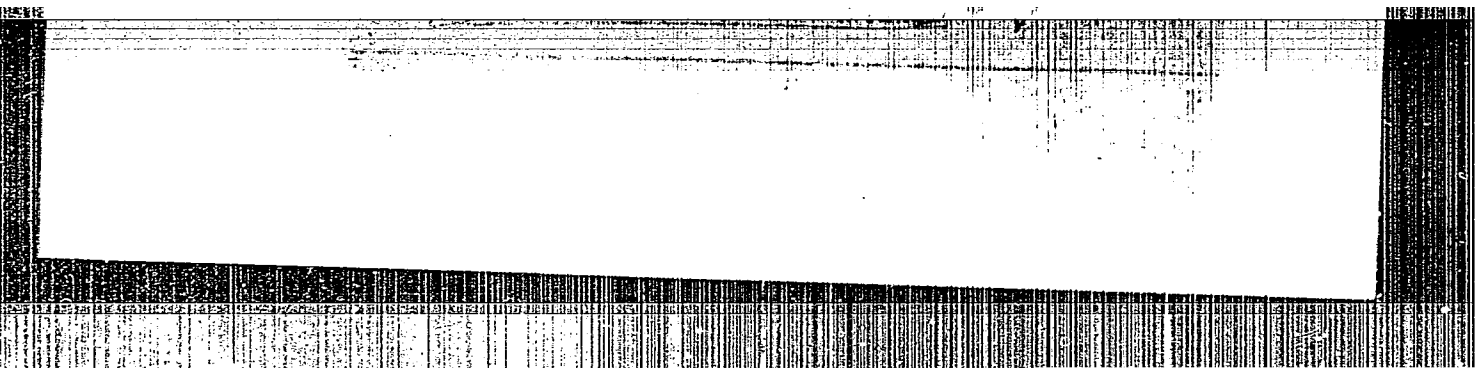
IVERMECTIN, H.V.C.

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THE UNIVERSITY OF ALABAMA

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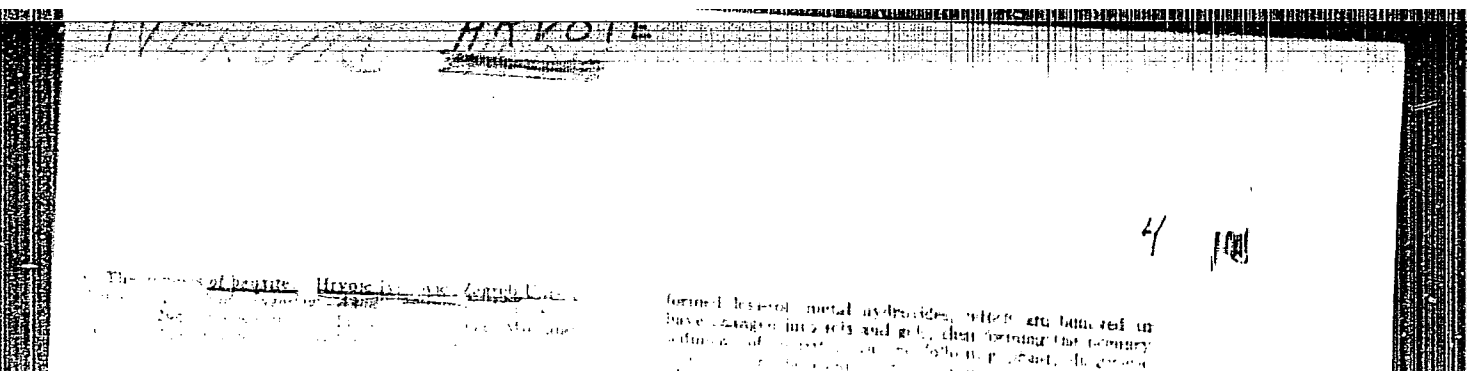
CIA-RDP86-00513R000619320001-9"

IVKOVIC, H.

(4) 10

The distribution of metals in bauxitic oolites. H. Ivković, S. Tšlak, and T. Marín (Zagreb Univ., Yugoslavia). *Radovi Jugoslav. Akad. Znanosti i Umjetnosti* 296, 101-6 (1953).—Chem. analyses of 7 fractions of oolites obtained from a sample of bauxite from Drniš (Yugoslavia) indicate that linear relationships exist between their Fe_2O_3 and V_2O_5 or Cr_2O_3 contents. For calcg. the approx. V_2O_5 and Cr_2O_3 contents of a bauxite one can use the formulas: $\% \text{V}_2\text{O}_5 = \% \text{Fe}_2\text{O}_3 \times 4.8 \times 10^{-3}$ and $\% \text{Cr}_2\text{O}_3 = \% \text{Fe}_2\text{O}_3 \times 5.1 \times 10^{-3}$. There are no relationships with regard to the MnO , TiO , Al_2O_3 , and SiO_2 contents. N. Plavšić.

11/15/54 WJ



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...or they might have been formed in the
same deposit but in various layers at different times.
W. F. Hess

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000619320001-9"

YUUG

1/ The genesis of bauxites. H. Ivckovic. Bull. intern.
~~acad. sciences ser. et beaux-arts~~ 1958, Serie 42, (Part 1) of
 math., phys. et tech., Livre 4, 93-7 (1954) (in English). - See
 GFA 48 11250c N. Phidz.

5

Mr. Que

IVEKOVIC, H.

IVEKOVIC, H.; ASPERGER, S. "Still on Z. Stalcer's 'critical review.'" *Arhiv. Za Kemiju, Zagreb*, Vol 26, No 2, July 1954, p. 122

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

Determination of the total organic carbon in aqueous solutions. A. Carling and H. Isakovic (Univ. Zagreb, Jugoslavia), Z. anal. Chem. 142, 49 (1954). Oxalic acid, urea, hippuric acid, cystine, dextrose, hexal, acetaldehyde, and uric acid were detd. in aq. solns. with results varying from 99.1 to 104.6% of the truth. The sample is acidified with H_2SO_4 and treated with 10 ml. of 1% $K_2Cr_2O_7$ soln. + 50 ml. of 0.1N H_2SO_4 + 100 ml. of 1% $K_2Cr_2O_7$ and the resulting CO_2 obtained by heating is passed through an upright condenser and into weighed Alcarite tubes. A second treatment is necessary. Measurements are taken to prevent absorption of CO_2 from the air. W. T. Hall.

IVEKOVIC, H.

✓ The conductometric determination of carbon in iron alloy
steel. H. Ivekovic and V. Polak. *Monatsh.* 89, 485-90 (1958).
The method consists of burning the sample in O₂
and measuring the cond. change of a Ba(OH)₂ soln. which
serves as an absorbent for the CO₂. H. Neubert

IVEKOVIC, H.

YUGOSLAVIA/Physical Chemistry - Solutions.
Theory of Acids and Bases

B-11

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3923

Author : Ivekovic H., Vrbaski T., Pavlovic D.

Title : On the Changes of Viscosity Preceding the Precipitation
of Aluminum Hydrate from Aluminate Solutions.

Orig Pub : Croat. chem. acta, 1956, 28, No 1, 41-51

Abstract : Study of the changes with time in the viscosity η and density d of aluminate solutions, at 1° (content of Al_2O_3 0.916-1.029 M, Na_2O 1.427-1.567 M). During the process of aging of aluminate solutions η and d increase at first, reaching a maximum 12-14 hours after preparation of the solution, after which their sharp decrease begins and a precipitation of aluminum hydroxide occurs. In solutions containing methanol, the variations of η and D are less pronounced. Periodical changes in properties are due to the fact that formation of higher

Card 1/2

- 176 -

IVERKOVIC, H.

Precipitations of alumina hydrate from aluminate solutions in the presence of some higher alcohols and starch. In English.

p. 101 (Croatica Chemica Acta. Vol. 28, no. 2, 1956. Zagreb, Yugoslavia)

Monthly Index of East European Accessions (EEA) 10. Vol. 7, no. 2,
February 1958

IVEKOVIC, H.

YUGOSLAVIA/Physical Chemistry - Thermodynamics. Thermochemistry, Equilibria,
Physical-Chemical Analysis, Phase Transitions. B-8

Abs Jour: Referat. zhurnal Khimiya, No 2, 1958, 3785.

Author : H. Ivekovic, I. Bacic.

Inst :

Title : On Some Regularities in Caustic Aluminate - Ethanol System.
I. New Phase Formation.

Orig Pub: Croat. chem. acta, 1956, 28, No 3, 181-190.

Abstract: The component concentration ratios were studied at caustic aluminate (I) titration with ethanol (II) at 30° up to the appearance of the first instable turbidity, temporary saturation, corresponding to the formation of a new phase. The latter depends on Al_2O_3 concentration to a greater degree than on Na_2O ; the amount of II for a given I is proportional to the amount of water. Equations determining the distribution of water among the component parts of I at the turbidity moment are derived. The solubility of

Card : 1/2

-25-

YUGOSLAVIA/Physical Chemistry - Thermodynamics. Thermochemistry, Equilibria,
Physical-Chemical Analysis, Phase Transitions. B-8

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3785.

the new phase decreases gradually with the rise of the II concentration and with time, and aluminum hydroxide is precipitating. This is explained by structural changes, during which hydro-complexes convert into tetrahydroxometa-aluminate with separation of OH^- , and later into polyaluminate $\text{Al}_n(\text{OH})_{3n}$. The concentration of various ions depends on the Al_2O_3 and Na_2O concentrations and on the alkalinity modulus ($\text{Na}_2\text{O}/\text{Al}_2\text{O}_3$). The equilibrium shifts to the hydrocomplex side at a high alkalinity modulus and to the polyaluminate side at a low one.

Card : 2/2

-26-

Ivekovic H.
YUGOSLAVIA/Analytical Chemistry - Analysis of Inorganic Substances.

E.

Abs Jour : Ref Zhur - Khimiya, No 9, 1958, 28421
Author : Ivekovic, H. and Basic, I.
Inst :
Title : Concerning Some Relationships in the System Aluminate
Liquor-Ethanol. II. An Approximate Determination of
Aluminum in Aluminate Liquors.
Orig Pub : Croat Chem Acta, 28, No 3, 191-193 (1956) (in German with
a Serbo-Croat summary)
Abstract : A method is described for the rapid approximate determi-
nation of Al in pure aluminate liquors (I). The method
is based on the titrimetric determination of the amount
of C_2H_5OH required to produce the first signs of turbidi-
ty in I lasting for 1 min. Equations for the calculation
of the concentration of Al_2O_3 are presented on the basis
of the previously discussed mechanism of the reaction

Card 1/2

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17

The spontaneous precipitation of hydrated alumina from aluminate solutions. T. Vrbaski, H. Ivekovic, and D. Pavlovic (Univ. Zagreb, Yugoslavia). *Can. J. Chem.* 36, 1410-15 (1958); cf. *C.A.* 30, 18507b; Calvet, *et al.*, *C.A.* 43, 5274h. —The rates of spontaneous pptn. of hydrated Al_2O_3 from unseeded and metastable Na aluminate solns. of a Na_2O/Al_2O_3 molar ratio from 1.15:1 to 1.00:1 were investigated. All pptn. curves showed autocatalytic characteristics with an induction period during which no pptn. occurred, a steady-state period, and a delayed pptn. period. Empirical equations are given for calcg. the max. pptn. rate and the amt. of ppt. at equil. J. Vandecasteele

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Iveković, H.

Distr: 483d

V Saturated ternary systems. I. Some physicochemical properties of solutions of 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane and of γ -1,2,3,4,5,6-hexachlorocyclohexane in the systems water-acetone and water-p-dioxane. H. Iveković (Univ. Zagreb, Yugoslavia) and B. Milković. *Chem. Abs.* 51, 83-84 (1959) (in English).—The soly. of 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane (p,p'-isomer of DDT) (I) and of γ -1,2,3,4,5,6-hexachlorocyclohexane (lindane) in the binary systems water-acetone and water-p-dioxane and the d., viscosity, surface tension, and n of both binary and the resp. ternary systems was detd. In the region corresponding to 20-25 mole % of either acetone or p-dioxane in the satd. ternary systems a sharp change of phys. properties indicates the existence of tri- or tetrahydrates of these org. solvents. A similar change in solns. contg. 60-80 mole % of the org. solvent may be explained by assuming a disintegration of its hydrate. In the H₂O-p-dioxane-I system 2 nonintermiscible layers were observed in the region from 30 to 62 mole % of p-dioxane. The results indicate that changes in phys. properties of ternary satd. systems are functionally dependent on the same changes in corresponding binary systems. II. Equation of solubility in a mixture of two solvents. B. Milković (Inst. zaštita, Belgrade, Yugoslavia) and H. Iveković. *Ibid.* 91-98 (1959) (in English).—An equation derived for the soly. of a substance in a mixt. of two solvents reads $dM_1/M_1 = KM_2dM_2$, where M_1 = mole fraction of dissolved substance, M_2 = mole fraction of one of the mixt. components, and K = const. of proportionality.

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